AMENDMENTS TO CLAIMS

Please amend claims 1-7 and add new claims 12 and 13 as follows. Claims 8-11 are withdrawn. A detailed listing of all present claims, withdrawn claims, and new claims, is provided below in compliance with revised 37 CFR 1.121.

1. (currently amended) A humidifier for a fuel cell, comprising:

a hollow fiber membrane module having a hollow fiber membrane bundle, comprising a plurality of hollow fiber membranes bundles together, and a housing which accommodates the hollow fiber membrane bundle, the hollow fiber membrane module feeding a reactive gas, which is to be supplied to a fuel cell, inside the housing and outside the hollow fiber membranes, and a feeding off-gas, exhausted from the fuel cell, into the hollow fiber membranes, thereby transferring water in the off-gas via the hollow fiber membranes to the reactive gas and humidifying the reactive gas;

an off-gas flow entrance which the off-gas flows through into the hollow fiber membrane, the off-gas flow entrance being provided in one end of the hollow fiber membrane module; and

a liquid exhaust mechanism which exhausts liquid, which has been generated from the off-gas flowing through the off-gas flow entrance.

2. (currently amended) A humidifier for a fuel cell according to [C]claim 1, further comprising a water blockage detecting unit which detects water blockage of the hollow fiber membrane in the off-gas flow entrance, the liquid exhaust mechanism being controlled in accordance with a detection result of the water blockage detecting unit.

3. (currently amended) A humidifier for a fuel cell according to [C]claim 1, further comprising a storing unit which stores the exhausted liquid, and a supplementary humidification unit which performs supplemental humidification of the reactive gas by using the liquid stored in the storing unit.

4. (currently amended) A humidifier for a fuel cell according to [C]claim 1, further comprising an output power detecting unit, which detects an output power of the fuel cell, and a controller, which uses the liquid exhaust mechanism to exhaust the liquid when the output power detected by the output power detecting unit is below a predetermined value.

5. (currently amended) A humidifier for a fuel cell, comprising:

a hollow fiber membrane module having a hollow fiber membrane bundle, comprising a plurality of hollow fiber membranes bundled together, and a housing which accommodates the hollow fiber membrane bundle, the hollow fiber membrane module feeding off-gas, exhausted from a fuel cell, inside the housing and outside the hollow fiber membranes, and feeding a reactive gas to be supplied to the fuel cell into the hollow fiber membranes, thereby transferring water in the off-gas via the hollow fiber membranes to the reactive gas and humidifying the reactive gas;

a supply gas flow exit through which the reactive gas is exhausted from inside the hollow fiber membranes, the supply gas flow exit being provided in one end of the hollow fiber membrane module; and

a liquid exhaust mechanism which exhausts liquid, which has been generated from the reactive gas fed through the supply gas flow exit.

6. (currently amended) A humidifier for a fuel cell according to [C]claim 5, further comprising a water level sensor, which detects accumulation of water in the supply gas feed exit, and a controller, which uses the liquid exhaust mechanism to exhaust the water when the water level sensor has detected that water is accumulating.

7. (currently amended) A humidifier for a fuel cell according to [C]claim 5, further comprising an output power detecting unit, which detects an output power of the fuel cell, and a controller, which uses the liquid exhaust mechanism to exhaust the liquid when the output power detected by the output power detecting unit is below a predetermined value.

8. (withdrawn) A fuel cell system comprising:

a fuel cell which generates electricity by a supply of reactive gas thereto; and

a water-permeable humidifier which humidifies the reactive gas by using water contained in off-gas, exhausted from the fuel cell;

wherein the fuel cell is formed by laminating an membrane electrode assembly, comprising an anode and a cathode on each side of a solid polymer electrolytic membrane, gas flow paths along which reactive gas is supplied on each side of the membrane electrode assembly, and a separator, which supports the membrane electrode assembly from both sides thereof; and

the water-permeable humidifier comprises a liquid exhaust mechanism, which exhausts water generated from at least one of the off-gas and the reactive gas, and a controller, which controls the liquid exhaust mechanism in accordance with the humidification status of the fuel cell.

9. (withdrawn) A fuel cell system according to Claim 8, the water-permeable humidifier comprising a hollow fiber membrane module having a hollow fiber membrane bundle, comprising a plurality of hollow fiber membranes bundled together, and a housing which accommodates the hollow fiber membrane bundle;

wherein the water-permeable humidifier feeds one of the off-gas and the reactive gas inside the hollow fiber membranes, and feeds another of the off-gas and the reactive gas outside the hollow fiber membranes, thereby transfers water in the off-gas via the hollow fiber membranes to the reactive gas.

10. (withdrawn) A fuel cell system according to Claim 9, wherein an off-gas flow entrance which flows the off-gas through the hollow fiber membrane module is provided in one end of the hollow fiber membrane module; and an off-gas flow exit which exhausts the off-gas flow the hollow fiber membrane module is provided at another end of the hollow fiber membrane module; and the liquid exhaust mechanism is provided at the off-gas flow entrance.

11. (withdrawn) A fuel cell system according to Claim 9, wherein a reactive gas flow entrance which flows the reactive gas through the hollow fiber membrane module is provided in one end of the hollow fiber membrane module; and a reactive gas flow exit which exhausts the reactive gas from the hollow fiber membrane module is provided at another end of the hollow fiber membrane module; and the liquid exhaust mechanism is provided at the reactive gas flow exit.

12. (new) A humidifier for a fuel cell according to claim 1, further comprising a controller for controlling the liquid exhaust mechanism in accordance with a humidification status of the fuel cell.

13. (new) A humidifier for a fuel cell according to claim 5, further comprising a controller for controlling the liquid exhaust mechanism in accordance with a humidification status of the fuel cell.